

ABSTRACT

A photoresist polymer for a top-surface imaging process by silylation (TIPS), and a photoresist composition comprising the same. The protecting group of the present photoresist polymer is selectively protected in an exposed region, and thus a hydroxyl group is generated. The hydroxyl group reacts with the silylation agent to cause a silylation process. Accordingly, when the photoresist film is dry-developed, the exposed region only remains to form a negative pattern. In addition, the present photoresist composition has excellent adhesiveness to a substrate, thus preventing a pattern collapse in forming a minute pattern. As a result, the present photoresist composition is suitable for a lithography process using light sources such as ArF (193nm), VUV (157nm) and EUV (13nm).

Formula 1

